8.12 TRAFFIC AND TRANSPORTATION

This section presents information on traffic and transportation as required by the siting regulations of the California Energy Commission. The potential effects on traffic and transportation resulting from construction and operation of the proposed Pico Power Project (PPP) were analyzed and are documented within this section. This section contains information on the existing transportation system together with a discussion of the potential effects of the project. Section 8.12.1 discusses the existing environmental setting; Section 8.12.2 discusses the environmental effects of project construction and operation; Section 8.12.3 evaluates potential cumulative impacts to traffic and transportation due to other simultaneous projects; Section 8.12.4 includes proposed mitigation measures during construction and operation; Section 8.12.5 presents applicable laws, ordinances, regulations, and standards (LORS); Section 8.12.6 provides agency contacts; Section 8.12.7 discusses permits and permit schedules, and Section 8.12.8 contains references.

8.12.1 Affected Environment

8.12.1.1 Regional Setting

The PPP project site is located in the City of Santa Clara in Santa Clara County, which is situated in the South Bay Subregion of the San Francisco Bay Area in California. The South Bay area is served by an extensive transportation system, including major freeway, highway, airport and rail facilities. Figure 8.12-1 illustrates the regional transportation setting. The primary transportation corridors in or near Santa Clara include Highway 101 (Bayshore Freeway); State Highways 17, 82, 85, and 237; and Interstate Highways 280, 680, and 880. The closest of these to the project site is Highway 101, which generally runs north-south, but takes on more of an east-west direction when passing through Santa Clara. A freeway, such as Highway 101 is defined in the Santa Clara General Plan as "high-speed, high-capacity, limited-access transportation facility serving regional and county-wide travel." In general, freeways are under the jurisdiction of the California Department of Transportation (Caltrans), while local roadways, collectors, and arterials generally fall under the jurisdiction of the City of Santa Clara. The Metropolitan Transportation Commission is responsible for regional transportation planning and coordination between all levels of government responsible for transportation development and maintenance.

Within the City of Santa Clara, Highway 101 has four lanes in each direction, which include a High Occupancy Vehicle (HOV) lane, or carpool lane. Interstate 280 runs north-south along the western side of Santa Clara, and has four lanes in each direction. Interstate 880 also runs north-south along the western side of Santa Clara and has four lanes in each direction in the vicinity of the project site. No construction is planned to occur on any of these freeways in the vicinity of the proposed project.

San Jose International Airport is located approximately 0.5 miles east of the project site.

8.12.1.2 Local Setting

The local transportation network near the site is illustrated in Figure 8.12-2. The PPP site can be accessed from Highway 101 and then along a variety of local access routes. The most likely (shortest) access routes are as follows:

- From Highway 101 northbound, exit De La Cruz Boulevard southbound 0.3 miles. Turn right onto Central Expressway (an east-west trending street), go 0.4 miles, turn right onto Lafayette Street, go 0.2 miles, turn left onto Duane Avenue, then turn left onto the site; or,

- From Highway 101 southbound, exit San Tomas Expressway southbound 0.5 miles. Turn left onto Central Expressway, go 0.8 miles. Turn left onto Lafayette Street, go 0.2 miles. Turn left onto Duane Avenue, then turn left onto the site.

The local roadways near the site that may experience direct project impact (i.e., those that will be impacted by the construction of the natural gas and waste water pipelines) are Lafayette Street between Gianera Street and Aldo Avenue, Bassett Street, Highway 101, Duane Avenue, Lafayette Street again between Duane Avenue and Comstock Street at the southern end of the natural gas pipeline, and Lafayette Street between Duane Avenue and Central Expressway for the waste water return pipeline. Section 8.6, Land Use, describes the pipeline corridor route. Construction practices to ensure safe, efficient and reliable access are described later in this section.

According to the Santa Clara General Plan (City of Santa Clara 1992), Highway 101, a major freeway, is expected to be congested by 2005, according to a traffic model developed by the Santa Clara County Center for Urban Analysis. The term "congested" can be interpreted as Level of Service (LOS) E or F. Table 8.12-1 provides a summary of levels of service rankings. Table 8.12-2 lists the planned roadway/traffic improvements in the vicinity of the PPP that the City of Santa Clara may consider within the next five years. These improvements are shown on Figure 8.12-3.

8.12.1.3 Other Transportation Issues and Plans

This section describes other traffic and transportation-related issues and plans important for the subsequent analysis of potential project impacts.

Passenger Vehicle/Truck Percentages

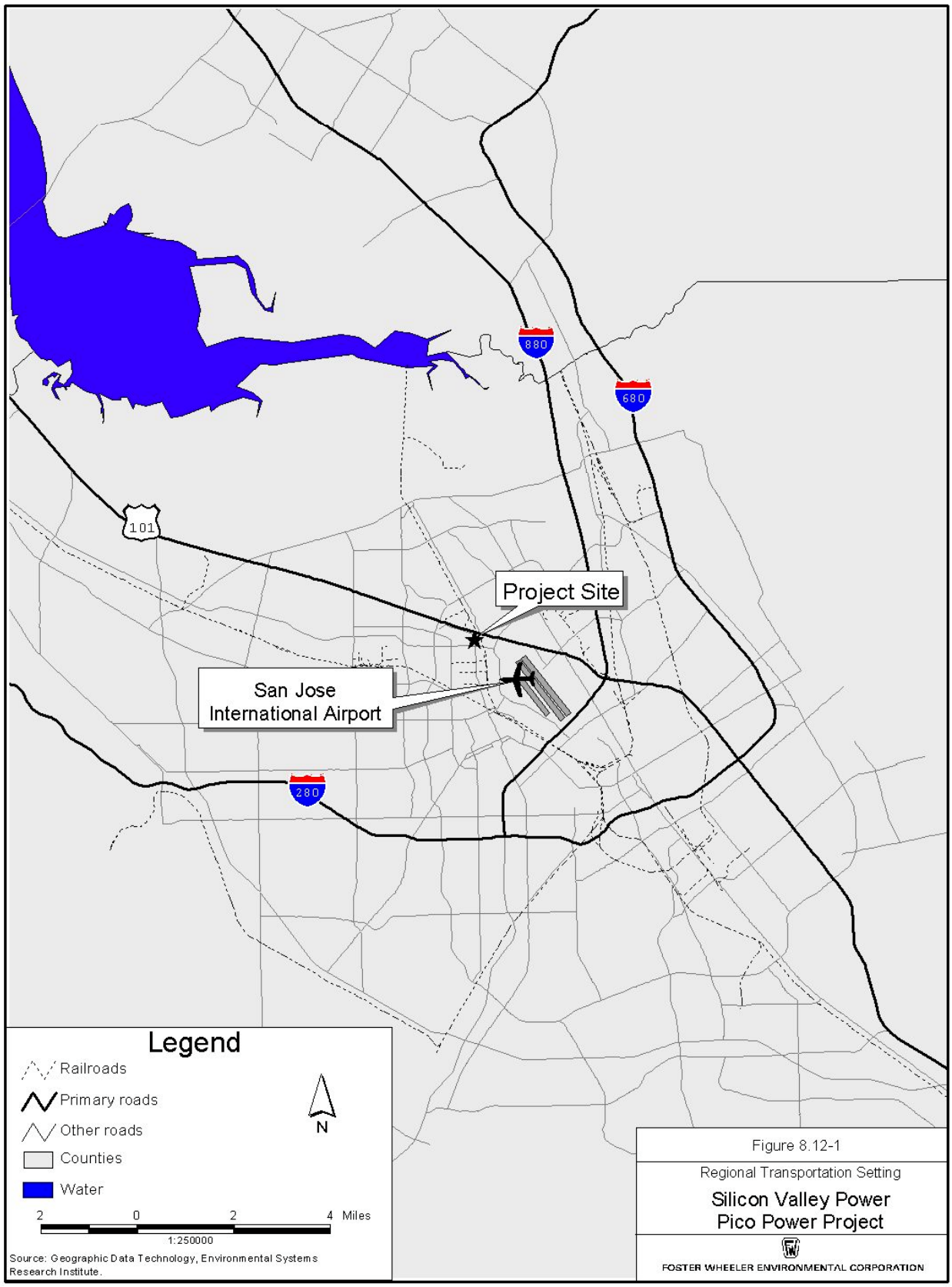
Recent peak hour critical turning movement traffic counts conducted by the Applicant (May 2002, see Appendix 8.12-A) determined that truck traffic on surface streets near the project site represents 4 to 6 percent of all vehicle traffic. Truck traffic is a common daily contributor to localized traffic in the industrial sector of the City Santa Clara. The project site is located in close proximity to interstate freeways and state highways that allow easy access to the project site for truck traffic and large loads. All roadways leading to the project site off of Highway 101 are designated as truck routes for delivery and services purposes.

Weight/Load Restrictions

The Santa Clara Transportation Element of the General Plan does not specifically detail size and weight/load limits for any roadways in the city (City of Santa Clara 1992b). Therefore, all applicable regulations are found in California Vehicle Code, which states that:

- The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.

- The maximum wheel load is the lesser of the following: (a) the load limit established by the tire manufacturer, or (b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.


880
680
101
280
Project Site
San Jose
International Airport
Legend
Railroads
Primary roads
Other roads
Counties
Water
N
2 0 2 4 Miles
1:250000
Source: Geographic Data Technology, Environmental Systems Research Institute.
Figure 8.12-1
Regional Transportation Setting
Silicon Valley Power
Pico Power Project
FOSTER WHEELER ENVIRONMENTAL CORPORATION

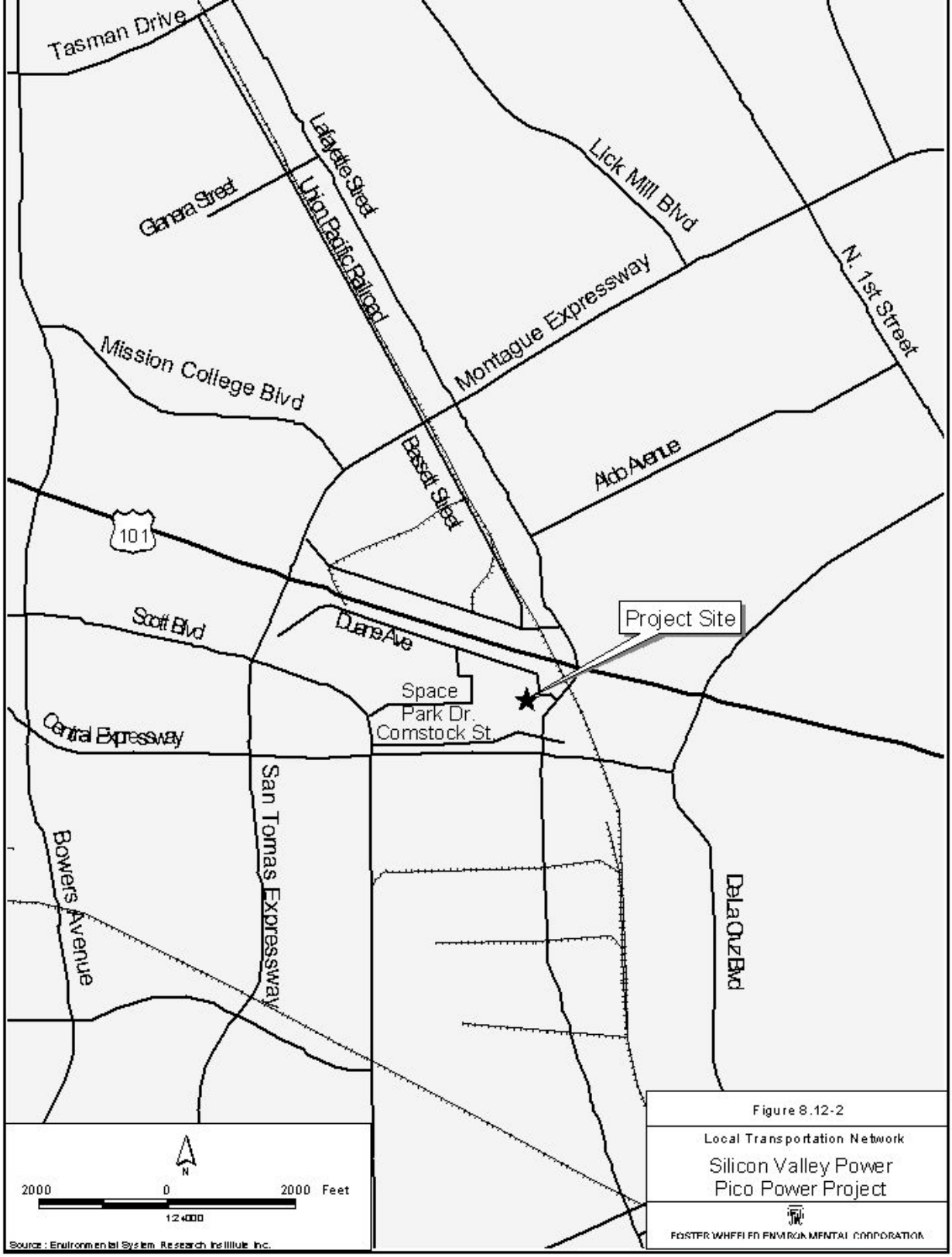

Tasman Drive
Lafayette Street
Union Pacific Railroad
Lick Mill Blvd
Garcia Street
Montague Expressway
N. 1st Street
Mission College Blvd
Basset Street
Alder Avenue
101
Scott Blvd
Dana Ave
Project Site
Space Park Dr.
Comstock St.
Central Expressway
San Tomas Expressway
Bowers Avenue
De La Cruz Blvd
2000 0 2000 Feet
1:24000
Source : Environmental System Research Institute, Inc.
Figure 8.12-2
Local Transportation Network
Silicon Valley Power
Pico Power Project
FOSTER WHEELER ENVIRONMENTAL CORPORATION

Table 8.12-1. Summary of levels of service for intersections.

Level of Service	Type of Flow	Delay	Maneuverability	Volume/Capacity V/C Ratio	Average Stop Delay/Vehicle (sec)
A	Stable Flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.	0.00–0.60	Less than 5.0
B	Stable Flow	Slight delay. If signalized, an occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	0.61–0.70	5.1 to 15.0
C	Stable Flow	Acceptable delay. If signalized, a few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71–0.80	15.1 to 25.0
D	Approaching Unstable Flow	Tolerable delay. Delays may be substantial during short periods, but excessive back-ups do not occur.	Maneuverability is severely limited during short periods due to temporary back-ups.	0.81–0.90	25.1 to 40.0
E	Unstable Flow	Intolerable delay. Delay may be considerable (up to several signal cycles).	There are typically long queues of vehicles waiting upstream of the intersection.	0.91–1.00	40.1 to 60.0
F	Forced	Excessive delay.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	Varies	Greater than 60.0

Table 8.12-2. Roadway/traffic planned improvements (see Figure 8.12-3).

Figure 8.12-3 Key No.	Planned roadway/transportation improvement
1	Construct grade-separated, multi-use path between Agnew Road and Scott Blvd. along San Tomas/Saratoga Creek bicycle/pedestrian way.
2	Widen Montague Expressway from four to six lanes in San Jose.
3	Implement Intelligent Transportation System (ITS) Area surrounding San Jose International Airport. Part of San Jose Airport Congestion Management Air Quality (CMAQ) program.
4	Rebuild the track and passenger platforms and construct track connections to enable ACE trains to stop at the Santa Clara station.
5	Implement centralized control system & track improvements in Santa Clara and San Mateo portion of Caltrain (see Metropolitan Planning Organization [MPO] comments).

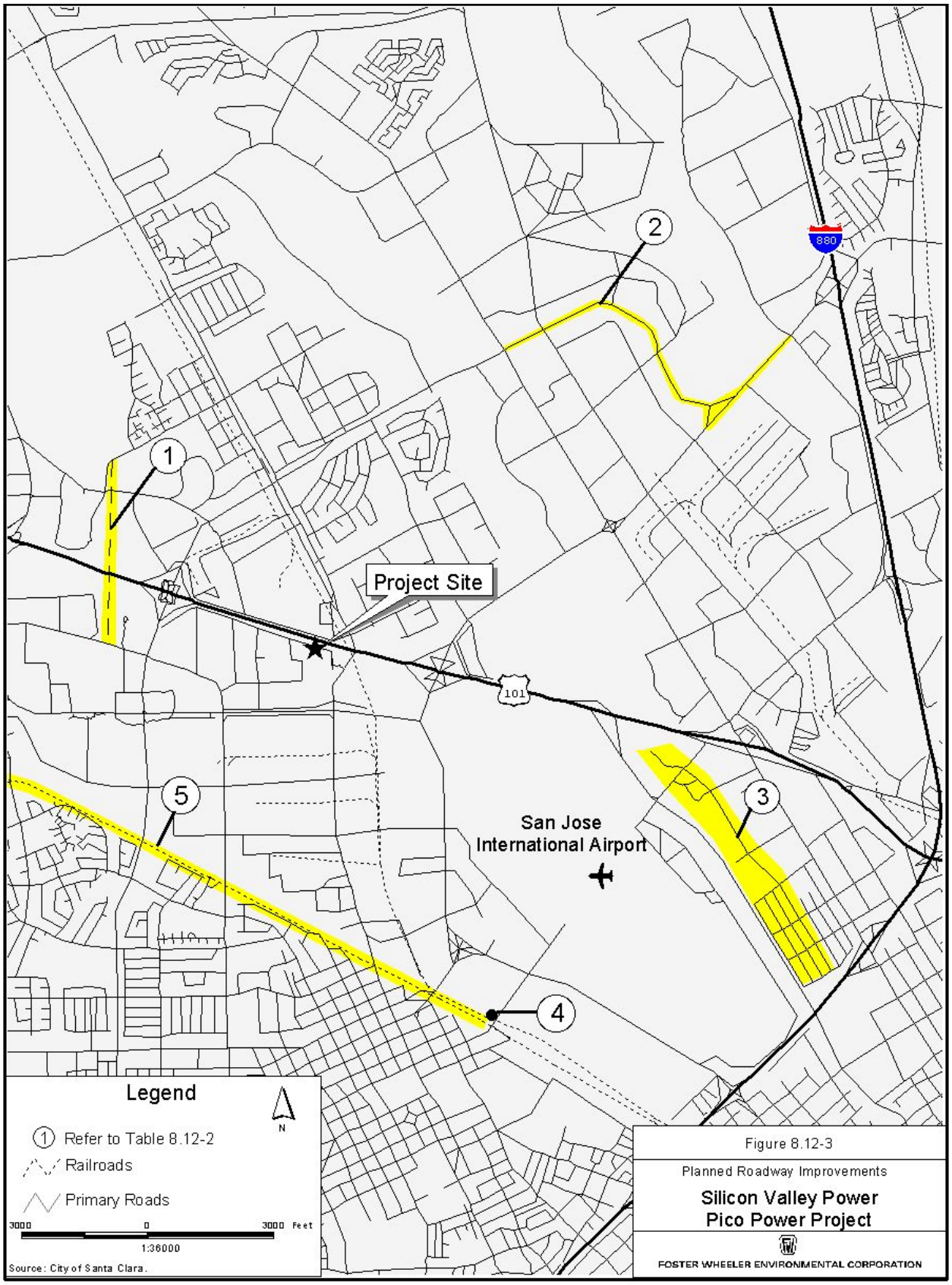
Sources: Metropolitan Transportation Commission (MTC) 2001.

- The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds; maximum allowable gross combination weight is 80,000 pounds (State of California Vehicle Code, Section 35550-35559).
- The maximum allowable vehicle height is 14 feet (State of California Vehicle Code, Section 35250-35252).
- The maximum allowable vehicle width is 102 inches (State of California Vehicle Code, Section 35100-35111).
- Maximum allowable length for single vehicle is 40 feet.
- Maximum allowable length for combination of vehicles is 65 feet.
- Maximum allowable length for combination of vehicles consisting of a truck tractor and two trailers is 75 feet, provided each individual trailer length does not exceed 28 feet 6 inches (State of California Vehicle Code, Section 35400-35414).

As noted in the Vehicle Code, these provisions would not apply if the city permitted the operation and transport of vehicles and loads on city roadways in excess of the maximum gross limits specified in the Vehicle Code (State of California Vehicle Code, Section 35780-35796).

Public Safety

There are no road features or characteristics in the project vicinity that will affect public safety nor are there any substandard bridges along the potential access routes. In addition, there are no city roadways that are subject to "normal" weather-related closures such as localized flooding or fog.


1
2
3
4
5
Project Site
101
880
San Jose
International Airport
Legend
Refer to Table 8.12-2
Railroads
Primary Roads
N
3000 0 3000 Feet
1:36000
Source: City of Santa Clara.
Figure 8.12-3
Planned Roadway Improvements
Silicon Valley Power
Pico Power Project
FOSTER WHEELER ENVIRONMENTAL CORPORATION

Truck Routes

The Santa Clara General Plan assumes truck traffic will utilize the major roadways of the community and avoid the residential local streets. The General Plan states: "The grid system of thoroughfares and expressways encourages truck traffic to stay on these major streets and off local streets except for deliveries. Truck traffic has not created any special problems for the road network except for those areas where trucks load while partially or completely parked in the public right-of-way and this is an operational, not a General Plan problem."

Hazardous Materials

The City of Santa Clara General Plan does not address hazardous materials transportation permits or routes.

Public Transportation

The City of Santa Clara and the surrounding area has an extensive public transportation system in place, consisting of an integrated air, bus, rail, and bike network. Both the existing transit network and the proposed transit improvements are shown on Figure 8.12-4.

Air service is provided by the San Jose International Airport for passenger, freight, and general aviation services. The San Jose International Airport is within one mile of the project site. The airport is expanding to meet the travel demands of the region. In addition to San Jose International Airport, air services can be obtained at the Oakland and San Francisco Airports located north of Santa Clara.

Public transit service is provided by the Santa Clara Valley Transportation Authority (VTA) Transit system, which provides buses and light rail. In addition, Caltrain operates a commuter train that has several stops in the City of Santa Clara. The Lawrence Caltrain Station is located just off of Lawrence Expressway and south of Kifer Road. The second stop for Caltrain is at the Santa Clara Caltrain and Transit Center located just across from Santa Clara University. Amtrak also provides train service from Silicon Valley to the Sacramento Valley on the Amtrak Capital Corridor route. VTA Transit provides service throughout the South Bay. The PPP project site is serviced by VTA bus routes 58 and 345, which are along Lafayette adjacent to the PPP project site and Central Expressway approximately one-quarter mile to the south of the project site.

Traffic Plans

The Federal Transportation Improvement Program (FTIP) and the State Transportation Improvement Program (STIP) have planned for several transportation improvement projects within the City of Santa Clara and the immediate area that would increase capacity and mitigate traffic congestion on local streets and roadways (FTIP 2000; MTC 2001). The classification and roadway design capacities of selected roadways that will be used to access the PPP site are shown in Table 8.12-3.

8.12.2 Environmental Consequences

8.12.2.1 Significance Criteria

Criteria used in determining whether project-related traffic impacts are significant are consistent with standard industry practice and California Code of Regulations Title 14, §15065. A project would have a significant effect on traffic and transportation if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system

- Exceed, either individually or cumulatively, a level of standard service established by the county Congestion Management Agency for designated roads or highways
- Result in a change in traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature or incompatible uses
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation.

Table 8.12-3. Road classification and design capacity.

Route	Classification	Design Capacity (ADT)	Design Speed (miles per hour)
Highway 101	Freeway	>40,000	65
Central Expressway	Expressway	25,000-40,000	55
Lafayette Street	Major Arterial	25,000-40,000	50
Scott Blvd	Minor Arterial	10,000-25,000	40
Duane Avenue	Minor Arterial	10,000-25,000	40

Source: Transportation Research Board, 1980.

According to the City's General Plan, the basic performance standard for intersections is LOS "D." The LOS calculation methodology prescribed by the Valley Transportation Authority's Traffic Level of Service Analysis Guidelines is based on critical movements. The VTA serves as the local congestion management agency for most of the southern San Francisco Bay area. The VTA also states that at Congestion Management Program (CMP) facilities, the basic LOS standard is LOS "E" (VTA 2001). For CMP intersections, LOS is based on evaluation of all intersection movements.

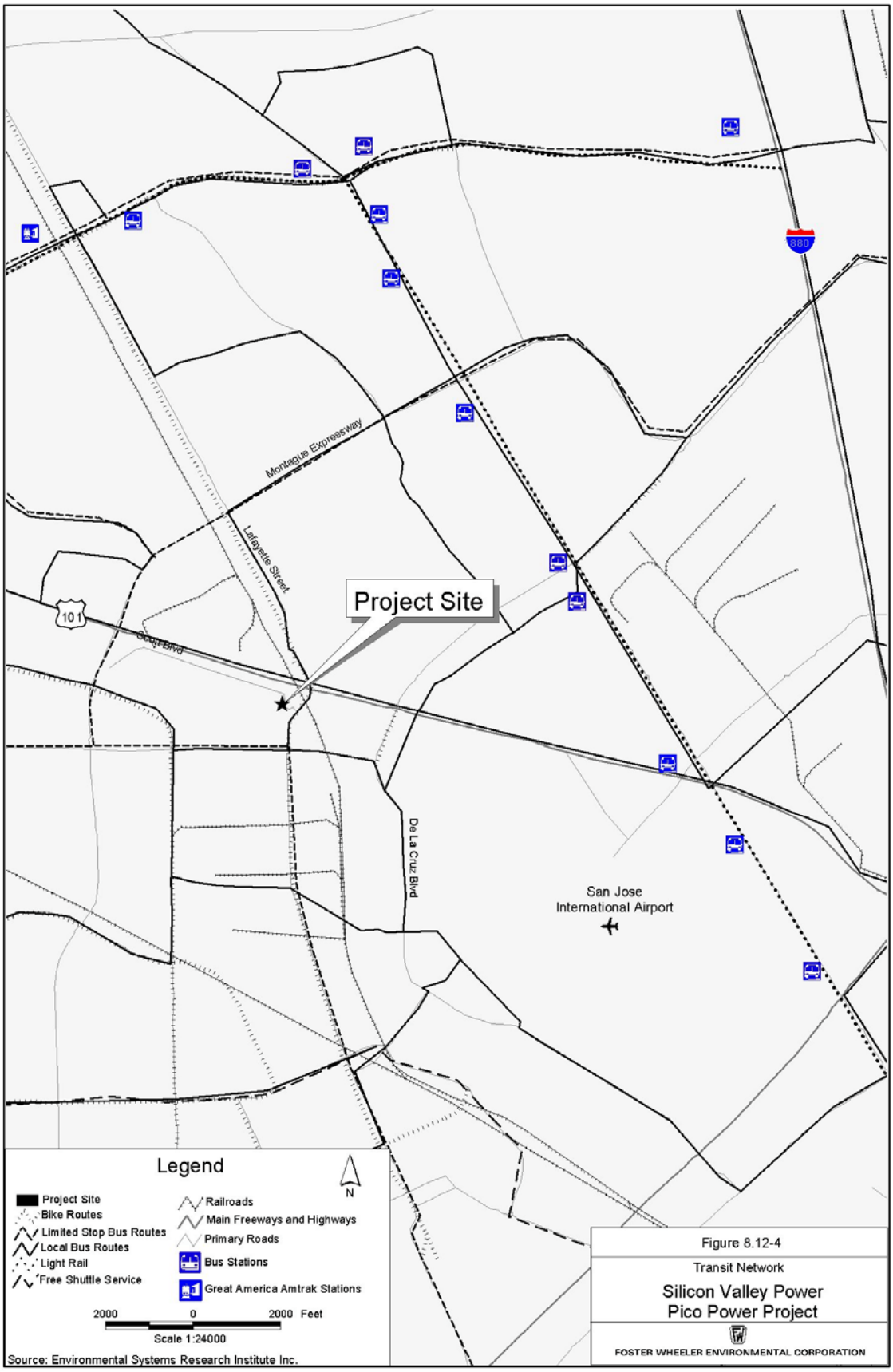
The VTA guidelines state that, for City of Santa Clara intersections, significant impact for a project is defined as:

- When the addition of project traffic would cause the intersection's LOS under background conditions to deteriorate from an acceptable level to LOS "E" or LOS "F", or
- If an intersection under background conditions already operates at LOS "E" or LOS "F", and under project conditions, critical movement delay would increase by four seconds or more.

For a CMP intersection, a significant impact for a project is defined as:

- When the addition of project traffic causes intersection's LOS under background conditions to deteriorate from acceptable level to LOS "F", or
- If an intersection under background conditions already operates at LOS "F", and under project conditions, critical movement delay would increase by four seconds or more, and
- Project traffic would increase the critical vehicle to capacity (v/c) value by 0.01 or more.

For a CMP freeway segment, significant impact for a project is defined as:


Montague Expressway
Lafayette Street
Project Site
101
Scott Blvd
De La Cruz Blvd
San Jose
International Airport
880
Legend
N
Project Site
Bike Routes
Limited Stop Bus Routes
Local Bus Routes
Light Rail
Free Shuttle Service
Railroads
Main Freeways and Highways
Primary Roads
Bus Stations
Great America Amtrak Stations
2000 0 2000 Feet
Scale 1:24000
Source: Environmental Systems Research Institute Inc.
Figure 8.12-4
Transit Network
Silicon Valley Power
Pico Power Project
FOSTER WHEELER ENVIRONMENTAL CORPORATION

- When the addition of project traffic would cause a freeway segment to deteriorate from an acceptable level under background conditions to LOS "F", or
- If a freeway segment under background conditions already operates at LOS “F” and, under project conditions, traffic would increase by 1 percent or more of capacity.

8.12.2.2 Level of Service Analysis Methodology

To assess the potential of the project-related traffic to impact local traffic congestion, the number of project-related trips through each key intersection and the intersection LOS were estimated for conditions before project construction, during construction, and during project operation. The trip estimating methodology is based on the Planning Method in the *Highway Capacity Manual 2000*, which provides a general discussion of intersection operations that is used to define the overall LOS at a signalized intersection, given existing traffic volumes and projected project-related traffic. The Planning Method calculates a “sum of critical volumes” for the critical traffic control phases of an intersection (phases for which there might be significant delay or obstruction), and a corresponding LOS. The critical volume is the volume of traffic that would cause a significant conflict with opposing traffic. This occurs where left-turning traffic obstructs through traffic at an intersection. The critical volume for an intersection as a whole is calculated as the number of vehicles turning left plus the number of through vehicles at a given intersection, for each flow direction possible at that intersection. For this analysis, the Applicant collected Peak Hour Critical Turning Movement Counts in late May of 2002 at intersections that might be impacted by the PPP project (Appendix 8.12-A). Figure 8.12-5 shows the intersections analyzed. City of Santa Clara provided information about the various combinations of signal phases (such as left-turn permissive, left-turn protected, etc.) for each key signalized intersection in the project area. Project-related impacts (e.g., LOS impacts) were not evaluated by roadway segment because Average Daily Traffic (ADT) data was not available for several key roadways.

The impact analysis assumes “average or better” conditions of geometry and traffic (i.e., vehicle headways, lane widths, truck percentages, effects of parking and pedestrians, etc.). After observing the project site and based on discussions with the City of Santa Clara, the project area’s geometry and traffic were deemed “average.” The procedure does not explicitly deal with signal timing and does not necessarily relate to the amount of vehicle delay. The procedure assumes a random arrival of vehicles on all approaches (rather than the vehicle platoons that are usually created by coordinated signal systems).

In cases where signal-protected left-turn phases are not provided at the intersection (in other words, a permissive left turn intersection), the “filtering” left-turn capacity for permissive left-turn movements during the green signal phase is calculated as follows:

Capacity = (1200 - Vo) x G/C

Where:

Capacity	=	filtering left-turn capacity in vehicles per hour (vph) for permissive left-turn movements during the green light
Vo	=	volume (vph) of opposing traffic, including through and right turning vehicles
G/C	=	proportion of light cycle during which the left turns and the opposing traffic have a green light (G = green time, C = total cycle time).

On single-lane approaches, estimates of the critical volumes and protected/permissive phasing are sometimes problematic due to the variable permissive left-turn capacity and the sometimes-varying lane use during a cycle.

On multi-lane approaches with permissive left-turn phasing, through and right-turn vehicles generally tend to shift to the right lane(s) to avoid being blocked by same-direction left-turn vehicles that are waiting for gaps in the opposing traffic stream. This shift is accounted for in the methodology by a factor that adjusts the proportion of vehicles blocked or stopped at the intersection.

At narrow, single-lane approaches, however, one or a few left-turn vehicles may block the entire approach. Thus, the critical volume for a single-lane approach would depend on the width of the approach, the presence and location of on-street parking, the length of the green light phase, the opposing traffic volume, and the proportion of left-turn vehicles in the traffic stream. For this analysis, it was assumed that all intersections with a single-lane approach will be wide enough to allow right-hand turns at the same time as left-hand turns.

The lowest critical volume (best LOS) for a single-lane approach is calculated as the highest combination of the through and right-turn volumes summed with the opposing left-turn volume. The highest critical volume (worst LOS) for a single-lane approach is calculated as the total of the approach volumes for both approaches. Separate right-turn phases are not considered in the critical volume calculation since right-turn movements in exclusive right turn-lanes are seldom a critical movement (especially where right turns on red are allowed).

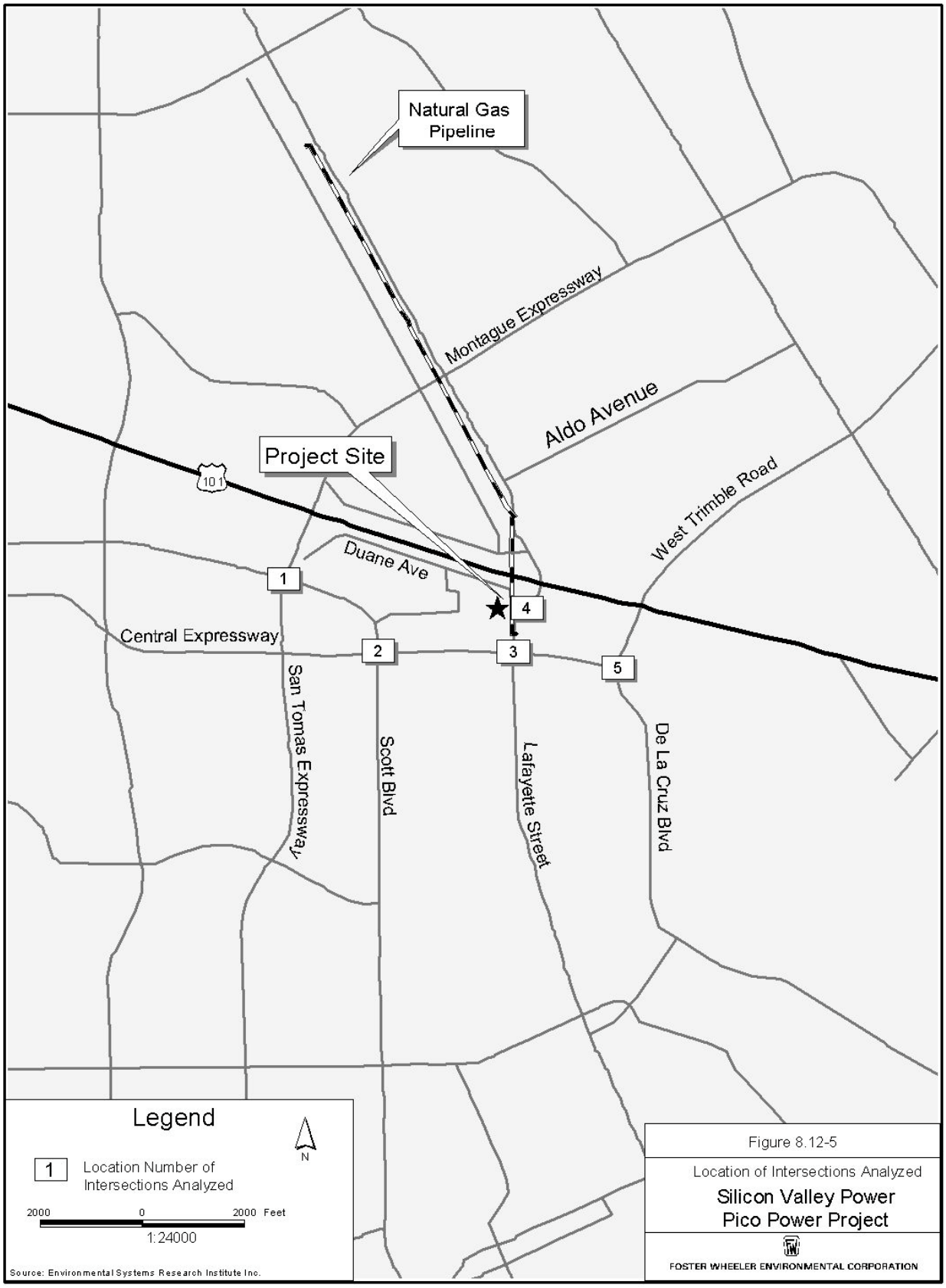
The guidelines used to identify LOS and volume/capacity (V/C) ratio based on the sums of intersection critical volumes are shown in Table 8.12-4. Table 8.12-4 shows critical volume thresholds for each LOS, A through F (the volume below which a given intersection remains at a given LOS). To define the level of service of an intersection with two-phase control, for example, given actual hourly traffic counts for the daily peak period of travel, one would add the left-turn volume to the opposing direction's through volume for all applicable travel directions at that intersection (for example, east-west, west-east, north-south, south-north). If the resulting sum of critical volumes were less than 900 cars, the LOS would be A. If a project were to add a volume of traffic to an intersection that would increase this sum of critical volumes to more than 900 cars, it would cause a change in LOS from A to B.

For this analysis, the traffic generated by the project in the study area during construction and operation was assigned to the surrounding street system for a hypothetical return commute. The resulting trip numbers were then added to the existing, critical volumes (based on Critical Turning Movement Counts of May 2002) for each key intersection and compared with the LOS thresholds listed in Table 8.12-6.

Table 8.12-4. Critical intersection threshold volume to capacity ratios by level of service.

Level of Service	Two-phase control	Three-phase control	Four or more phases	Typical V/C ratio
A	900	855	825	0.00-0.60
B	1050	1000	965	0.61-0.70
C	1200	1140	1100	0.71-0.80
D	1350	1275	1225	0.81-0.90
E	1500	1425	1375	0.91-1.00
F	N/A	N/A	N/A	Varies

Source: Transportation Research Circular 212 (Transportation Research Board 1980).


Natural Gas Pipeline
Montague Expressway
Aldo Avenue
Project Site
101
West Trimble Road
Duane Ave
1
4
Central Expressway
2
3
5
San Tomas Expressway
Scott Blvd
Lafayette Street
De La Cruz Blvd
Legend
1
Location Number of Intersections Analyzed
N
2000 0 2000 Feet
1:24000
Source: Environmental Systems Research Institute Inc.
Figure 8.12-5
Location of Intersections Analyzed
Silicon Valley Power
Pico Power Project
FOSTER WHEELER ENVIRONMENTAL CORPORATION

The key analysis assumptions were as follows:

- No ridesharing, public transit, or carpooling to the project site
- The normal construction workday begins at 7:00 a.m. and ends at 3:30 p.m. (The work site, however, would be active between 6:00 a.m. and 6:00 p.m.)
- All construction traffic arrives during the peak traffic periods am and pm

The daily peak traffic hour can vary by intersection, but at the most important intersection in this analysis, Duane Avenue and Lafayette Street, it is 7:00 to 8:00 a.m. To be conservative, however, this analysis assumes that all construction traffic arrives during the peak periods. This number was chosen as the most extreme worst-case scenario of peak-hour trips that the project could generate.

Based on an analysis of the local grid system, workers commuting from outside of the local area, and historical traffic data, it was assumed that traffic coming out of the project site in the afternoon will split 90 percent heading east on Duane Avenue and 10 percent heading west on Duane Avenue. At Duane and Lafayette Street, it was assumed 80 percent of the traffic will turn south going to Central Expressway and 20 percent will turn north on Lafayette Street. At Central Expressway and Lafayette Street it was assumed traffic will spilt 50 percent to the west and 50 percent to the east. It is also fair to assume that much of the construction workforce could arrive from outside the immediate area and would thus want to access Highway 101 to disperse through the freeway system. The remaining 10 percent of the traffic going west on Duane Avenue will disperse onto San Tomas Expressway and Central Expressway and, from there, to other roadways in the adjacent neighborhoods. Traffic dispersion assumptions are given in Appendix 8.12-A.

8.12.2.3 Construction Phase Impacts

Power Plant Site and Natural Gas Compressor Station

The main access point to the PPP project site for construction activities will be from the northern entrance on Duane Avenue. A secondary entrance/egress will be provided off of Comstock Street, with limited parking south of the Kifer Receiving Station. Currently most of the PPP site is covered with some type of all-weather surface to provide internal access to all project facilities and on-site buildings. Locked gates and perimeter fencing will control access into the PPP site. Vehicular traffic into and out of the site will be limited as much as practical to daylight hours. There will be adequate internal circulation and parking. Due to the nature of the construction, along with the limited size of the site, additional parking will be available across the street from the PPP project site on City-owned property at the corner of Comstock and Lafayette streets. Laydown of materials during the construction period will take place on and off site. Four off-site city properties in close proximity to the PPP project site will be used for laydown areas (vacant land at Scott Receiving Station, the City maintenance yard at the corner of Comstock and Lafayette Streets, Kifer Receiving Station, and Brokaw Substation near De La Cruz Boulevard and Coleman Avenue). Please see Figure 2.2-5 in project description section for laydown and parking areas locations.

During the construction phase of the PPP project, the parking needs will be much greater than for the operational phase. With a peak construction force of 206 employees, it is estimated that approximately 1.7 acres of land is required to accommodate the projected vehicles from such an employee base. Construction employee parking will be provided on available space at the adjacent Kifer Receiving Station and at the City of Santa Clara maintenance facility across Layfayette Street. The available space

at these sites exceeds 1.7 acres. It is anticipated that all vehicles associated with the construction phase will be parked on these sites, and thus will not impact on-street parking in the surrounding industrial area.

Construction of the proposed facility will take place from the summer of 2003 to the winter of 2004, for a total duration of 18 to 20 months. It is anticipated that the on-site construction workforce required to build the PPP will be drawn from the Bay Area regional labor pool. The average construction workforce will be approximately 114 persons, with a peak construction workforce of 206 persons (see Table 8.10-5 in the Socioeconomics section). According to the Metropolitan Transportation Commission (MTC), approximately 30 percent of cars have more than one occupant during commute time (MTC 2001). To determine if any significant traffic impacts would occur under the most severe traffic scenario, the 206 peak workers anticipated for the project construction were assumed to arrive during the peak hour for all commuters in Santa Clara. This approach illustrates the worst-case scenario for traffic associated with this project at all potentially affected intersections. Trip generation data used in this analysis are based on Silicon Valley Power's extensive experience with the planning and construction phases of a variety of public utility projects and the special spatial constraints of the PPP project site.

In reality, construction personnel tend to arrive at a project site at or near 6:00 am, before the morning peak hour (7:00 am to 8:00 am). In addition, construction workers typically leave between 3:00 pm and 4:00 pm, whereas the evening peak hour is between 5:00 pm and 6:00 pm. See Appendix 8.12-A, Traffic Counts, for details. Although the traffic study was completed assuming no ridesharing, this project will undoubtedly have a some level of ride sharing. Therefore, this study incorporates very conservative assumptions for planning and impact analysis purposes.

Table 8.12-6 lists the background peak traffic, construction-related traffic (existing plus project), and operation phase traffic (existing plus project) from the PPP project at each key intersection analyzed. Key intersections analyzed are identified in Figure 8.12-3. Traffic associated with project construction and operation was added to existing traffic and distributed to the local and regional street and highway system by estimate (see assumptions below) and in Appendix 8.12-A. The resulting traffic volumes were added to the existing critical volumes for each intersection to determine whether or not the project could cause a change in the existing LOS and, hence, a significant adverse impact.

Bayshore Freeway (Highway 101), Central Expressway, San Tomas Expressway, De La Cruz Boulevard, Lafayette Street and Comstock Street are the primary roadways that will be used for travel to and from the project work site. Lafayette Street and Central Expressway will experience the greatest volume of construction traffic, since they are the primary access routes. The estimated additional traffic volumes (construction and operation) on each street from the PPP construction traffic are shown in Figure 8.12-6. These estimates, and the estimates of traffic flowing through the various intersections, were derived based on the following general assumptions:

- Maximum number of employees at the PPP site during the construction phase is 206.
- Maximum number of employees at the PPP site during the operations phase is 15.
- More than one-half of the employees will be coming from the area south of the Bayshore Freeway.
- Of the total number of vehicles accessing the site, five percent will be heavy vehicles, or trucks (a “heavy vehicle” is constituted of one with more than four wheels).
- Most of the construction and operation personnel traffic will originate in south Bay Area communities, such as Santa Clara, Sunnyvale, San Jose, Cupertino, and Milpitas.

Table 8.12-5. Existing peak hourly traffic* compared with peak PPP construction and operation traffic at key intersections.

	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Central Expressway (E-W) and Lafayette Street (N-S)—Two phases—Morning peak												
Existing conditions	301	814	99	237	632	184	272	709	204	128	300	133
Existing + peak construction	375	814	99	237	632	258	272	709	204	128	300	133
Existing + peak operation	307	814	99	237	632	190	272	709	204	128	300	133
Central Expressway (E-W) and Lafayette Street (N-S)—Two phases—Evening peak												
Existing conditions	157	1240	221	225	469	68	141	223	246	441	923	252
Existing + peak construction	157	1240	221	225	469	68	141	223	246	515	923	326
Existing + peak operation	157	1240	221	225	469	68	141	223	246	447	923	258
Central Expressway (E-W) and Scott Boulevard (N-S)—Two phases—Morning peak												
Existing conditions	64	804	293	252	986	145	594	473	484	60	128	33
Existing + peak construction	64	834	293	252	986	145	594	473	491	97	128	33
Existing + peak operation	64	806	293	252	986	145	594	473	485	63	128	33
Central Expressway (E-W) and Scott Boulevard (N-S)—Two phases—Evening peak												
Existing conditions	83	1369	693	283	588	48	238	157	311	193	355	75
Existing + peak construction	83	1369	693	290	618	85	238	157	311	193	355	75
Existing + peak operation	83	1369	693	284	590	51	238	157	311	193	355	75
Scott Boulevard (E-W) and San Tomas Expressway (N-S)—four phases—Morning peak												
Existing conditions	97	108	19	272	262	46	78	3535	317	231	1324	296
Existing + peak construction	97	108	19	272	262	46	78	3535	317	261	1324	296
Existing + peak operation	97	108	19	272	262	46	78	3535	317	234	1324	296
Scott Boulevard (E-W) and San Tomas Expressway (N-S)—four phases—Evening peak												
Existing conditions	317	332	44	61	106	307	44	1512	36	203	4718	127
Existing + peak construction	317	332	44	61	106	337	44	1512	36	203	4718	127
Existing + peak operation	317	332	44	61	106	310	44	1512	36	203	4718	127
Central Expressway (E-W) and De La Cruz Boulevard (N-S)—Two phases—Morning peak												
Existing conditions	1176	--	49	--	--	--	600	1412	--	--	718	837
Existing + peak construction	1176	--	49	--	--	--	615	1412	--	--	718	896
Existing + peak operation	1176	--	49	--	--	--	601	1412	--	--	718	842
Central Expressway (E-W) and De La Cruz Boulevard (N-S)—Four phases—Evening peak												
Existing conditions	1432	--	469	--	--	--	182	830	--	--	1508	725
Existing + peak construction	1491	--	484	--	--	--	182	830	--	--	1508	725
Existing + peak operation	1437	--	470	--	--	--	182	830	--	--	1508	725

Table 8.12-5. (continued.)

	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lafayette Street (N-S) and Duane Avenue (E-W)—unsignalized—Morning peak												
Existing conditions	18	--	41	--	--	--	59	983	--	--	2439	46
Existing + peak construction	18	--	41	--	--	--	207	983	--	--	2439	83
Existing + peak operation	18	--	41	--	--	--	71	983	--	--		48
Lafayette Street (N-S) and Duane Avenue (E-W)—unsignalized—Evening peak												
Existing conditions	26	--	85	--	--	--	62	355	--	--	1089	13
Existing + peak construction	63	--	233	--	--	--	62	355	--	--	1089	13
Existing + peak operation	28	--	97	--	--	--	62	355	--	--	1089	13

*Actual traffic counts were performed on Tuesday May 21 (PM) and Wednesday May 22 (AM), 2002. Weather was clear and dry.

- From the northern exit of the PPP site (Duane Avenue), ten percent of the vehicles will go west, and 90 percent will go east to Lafayette Street.
- At Lafayette Street, 20 percent of the vehicles will go north on Lafayette Street and 80 percent will go south to Central Expressway.
- At Central Expressway, the vehicles will split evenly, with 50 percent going west towards San Tomas Expressway and 50 percent going towards De La Cruz Boulevard. The intent of most of these cars is to get to the Bayshore Freeway onramps at San Tomas Expressway and De La Cruz Boulevard.
- At Scott Boulevard, ten percent of the vehicles go south towards central Santa Clara, 50 percent go west towards San Tomas Expressway, and 40 percent go north to get to San Tomas Expressway on Scott Boulevard.
- At Scott Boulevard and San Tomas Expressway, all of the vehicles go north to the Bayshore Freeway onramp, where they will likely take the freeway to the north.
- At Central Expressway and De La Cruz Boulevard 80 percent of the vehicles will go north towards the Bayshore Freeway onramp, at which point they will merge onto the freeway, heading southeastward into San Jose. The remaining 20 percent will go south towards the Central Santa Clara and San Jose.
- Drivers generally choose the shortest distance to freeway access, though they may select alternate routes.

Projected LOS impacts during construction for selected roadway intersections are summarized in Table 8.12-6. No LOS classifications will change negatively as a result of the PPP construction or operation.

Table 8.12-6. Construction and operation phase LOS for selected roadway intersections.

	Existing[1]		Construction Phase		Operation Phase	
Intersection	Total Peak In/Out Vehicle Trips at Intersection	LOS[2]	Total Peak In/Out Vehicle Trips at Intersection	LOS[2]	Total Peak In/Out Vehicle Trips at Intersection	LOS[2]
Central @ Lafayette (AM)	4022	E	4099	E	4025	E
Central @ Lafayette (PM)	4606	F	4692	F	4618	F
Central @ Scott (AM)	4316	D	4359	D	4322	D
Central @ Scott (PM)	4392	F	4436	F	4399	F
Scott @ San Tomas (AM)	6658	D	6675	D	6661	D
Scott @ San Tomas (PM)	7807	F	7824	F	7810	F
Central @ De La Cruz (AM)	4792	F	4835	F	4798	F
Central @ De La Cruz (PM)	5146	F	5180	F	5151	F
Lafayette @ Duane (AM)	3586	F	3694	F	3600	F
Lafayette @ Duane (PM)	1630	F	1738	F	1644	F

[1] Source = Traffic counts performed on May 21 and May 22, 2002.
[2] Current LOS is based on intersection delay rather than critical v/c ratio.

The traffic models performed provide conservative estimates for two reasons:

1. The models show the personnel arriving and leaving only at peak travel hours. In reality, most construction workers arrive and leave well before the peak travel hours.
2. The models utilize the estimated number of employees during the peak of the construction phase, not the average.

For these intersections, the project's effect on the volume to capacity ratio is very small and not enough to cause a decrease in LOS. Further away from the key intersection of Lafayette Street and Duane Avenue, the project's effect is barely perceptible in the volume/capacity ratio.

Truck Routes

Increased transportation due to the power plant construction will include deliveries of plant equipment and construction materials by truck, such as concrete, steel, and lumber. Truck deliveries will occur between 7:00 a.m. and 4:30 p.m. on weekdays. In total, approximately 2,160 truck deliveries of materials and supplies are expected between summer 2003 and winter 2004, an average of about 6 deliveries per weekday. At various times during peak construction, the number of daily deliveries will increase to as many as 25 per day. This will not significantly affect the traffic/truck mix along state highways, but it may increase the ratio of trucks to passenger vehicles on city streets for short durations of time. The percentage breakdown of truck deliveries by load type is presented in Table 8.12-7.

Table 8.12-7. Truck deliveries by type and percentage**.**

Delivery type	Percent
Major equipment (components of the heat recovery steam generator, combustion turbine generator and steam turbine generator)	18
Mechanical equipment	4
Electrical equipment and material	7
Piping, supports, and valves	10
Concrete and reinforcing steel	29
Miscellaneous steel, roofing, and siding	6
Administration and warehouse buildings	1
Construction consumables	15
Office supplies	2
Contractor mobilization and demobilization	3
Construction equipment delivery and pickup	5

All deliveries to the PPP project site will occur from Duane Avenue, utilizing Lafayette Street. Based on the city truck routes, the following routes will be used for truck deliveries to the power plant site:

- From Highway 101 (Bayshore Freeway) Northbound, exit at De La Cruz Boulevard, turn left and proceed over the overpass to Central Expressway, turn right on Central Expressway over the Union Pacific Railroad and then turn right on Lafayette Street. After passing Comstock Street, turn left onto Duane Avenue and then left into the project site.
- From Highway 101 (Bayshore Freeway) Southbound, exit at the San Tomas Expressway, and proceed southbound to the Central Expressway intersection. Turn left at Central Expressway and proceed east to Lafayette Street. Turn left at Lafayette Street, and after passing Comstock Street, turn left onto Duane Avenue and then left into the project site.

In conclusion, significant effects on the local transportation system are not expected from power plant construction activities for the following reasons:

- The only noticeable effects on traffic will be localized near the construction site.
- The PPP construction shift will generally begin at or prior to 7:00 am and finish at or prior to 3:30 pm. This will limit the number of vehicles during peak hour traffic periods and thus reducing potential traffic effects.
- The projected number of truck deliveries over the construction period is not expected to significantly impact truck/passenger car traffic ratios of the surrounding network as occurring at present. Any noticeable impact in traffic composition will likely be limited to a relatively small number of days when concrete deliveries will be made. Other deliveries will be spread over the construction period and will not significantly affect local traffic.

Delivery of Hazardous Materials

In general, only small quantities of hazardous materials will be used during the construction period as described in Section 8.5, Hazardous Materials Handling, which will be shipped by truck. This may consist of welding flux, paint, and various solvents. The pipes and boiler will be cleaned prior to startup using various alkaline solutions. These cleaning chemicals will be used in such small quantities that there will probably not be separate truck deliveries of hazardous materials during construction. If this should become necessary, however, all applicable requirements will be met, including the use of transporters with a Hazardous Material Transportation License. Additionally, all deliveries will follow the City-designated truck route, which offers the shortest overall transit time possible and avoids congested thoroughfares, places where crowds are assembled, and residential districts. This route runs along Highway 101, De La Cruz Boulevard, Central Expressway, Lafayette Street, and Duane Avenue. The truck route is 0.88 of a mile from the freeway interchange to the PPP site.

Silicon Valley Power will obtain appropriate permits required by the State of California (Table 8.12-8). Transport of hazardous materials on city roadways will be limited in that the project site is within 0.5 mile of the interchange for Highway 101.

Oversize or Overweight Shipments

Certain components of the facility are of such dimension and weight that special delivery will be required during construction. Oversize/overweight shipments are anticipated to be transported by heavy-load truck delivery. According to the City of Santa Clara, there are no substandard bridges along any city roadways. Any necessary ground shipment exceeding the size and/or weight/load limits described would require a Single Trip Transportation Permit (State of California Vehicle Code, Sections 35780-35796). Appropriate permits will be obtained for all deliveries to comply with local laws and ordinances.

Natural Gas Pipeline and Metering Station

The natural gas pipeline route runs from the source at Gianera Street and Wilcox Avenue, then along Lafayette Street to Bassett Street. It then turns south, crosses Highway 101, and enters Duane Avenue for a short distance, running southeast towards Lafayette Street again, and finally southward to the natural gas compressor station. Section 5 describes the route in detail. Pipeline construction will involve boring and jacking, open trenching, stringing, welding, radiographic inspection, coating, lowering-in, backfilling, street repair, hydrostatic testing, and clean-up activities. These will each be completed as a single, sequenced, construction effort. Access during pipeline construction will be along existing roads and right-of-ways. An encroachment permit will be obtained from the City of Santa Clara Public Works Department prior to construction. In addition, an encroachment permit will be obtained from Caltrans to bore under Highway 101 (Bayshore Freeway). Construction damage to existing roads will be repaired to original or as near original condition as possible. Traffic management plans will be filed with the City of Santa Clara as part of the encroachment permit approval.

There is a potential for minor, short-term increases in motor vehicle hazards due to the nature of pipeline construction and operation of construction equipment. For example, there may be temporary closures of the Lafayette "slow lane" and detours necessary to complete construction. Using standard linear construction practices (i.e., warning signs and lights, cones, and "reduce speed" notices), however, will reduce these impacts to a less than significant level. Traffic control, including signage and flag persons, will be required on all road segments during construction. Overall, construction of the proposed gas pipeline route is not anticipated to create long-term effects on the transportation system in the area.

Waste Water Discharge Pipeline

A new, 900-foot-long waste water discharge pipeline will be installed in Lafayette Street, from the PPP site to the existing 27-inch sanitary sewer main in Central Expressway. Access during pipeline construction will be along existing roads and right-of-ways. An encroachment permit will be obtained from the City of Santa Clara Public Works Department prior to construction. Construction damage to existing roads will be repaired to original or as near original condition as possible. Traffic management plans will be filed with the City of Santa Clara as part of the encroachment permit approval.

There is a potential for minor, short-term increases in motor vehicle hazards due to the nature of pipeline construction and operation of construction equipment. For example, there may be temporary closures of the Lafayette "slow lane" and detours necessary to complete construction. Using standard linear construction practices (i.e., warning signs and lights, cones, and "reduce speed" notices), however, will reduce these impacts to a less than significant level. Traffic control, including signage and flag persons, will be required on all road segments during construction. Overall, construction of the proposed waste water discharge pipeline route is not anticipated to create long-term effects on the transportation system in the area.

Construction Laydown Areas

There is a potential for minor traffic delays due to the movement of materials and equipment between the construction laydown areas and the PPP site. Laydown areas currently identified include a vacant 0.4-acre portion of the Scott Receiving Station; a portion of the City's maintenance yard (approximately 0.4 acres) to the southeast of the project on the northeast corner of Lafayette and Comstock Streets (this area will also be used for construction parking); and a 1.9-acre vacant lot south of the Brokaw Substation, located east of De La Cruz Boulevard, south of Coleman Avenue, and west of Brokaw Road. Any use of

these areas for off-site parking would help to alleviate existing traffic congestion at Comstock and Lafayette streets during project construction and possibly at other intersections as well.

8.12.2.4 Operation Phase Impacts

Power Plant Site and Natural Gas Compressor Station

The proposed project will generate a maximum of 14 round trips per day to the facility. These include 4 round trips by employees and 10 round trips by tradespeople, vendors, consultants, and management personnel. There will be a maximum of 15 full-time employees working at the plant. The PPP plant will be operated by a staff consisting of 2 operators per 12-hour rotating shift (8 a.m. to 8 p.m.), with two relief operators; there will also be 2 maintenance technicians during the standard 8-hour workday. The facility will be operated 7 days per week, 24 hours per day. The additional 14 trips generated by power plant operations represent an increase of 0.8 percent to the 1,630 peak hour traffic volume at Duane Avenue and Lafayette Street intersection near the PPP project entrance This is a negligible amount, which will not result in any change in LOS classification of the affected roadways. Round trips generated by power plant operations personnel will be spread over two shifts and represent a negligible increase in peak hour or daily traffic volumes.

Access to the power plant site will be provided by one driveway located on Duane Avenue approximately 50 yards west of the intersection Duane Avenue and Lafayette Street. The ingress/egress has been designed to allow large truck vehicles the ability to pull off of Duane Avenue onto a driveway to await opening of the security gate and gain access to the power plant. The driveway location will provide the necessary sight distance to allow safe entrance/egress of vehicular traffic. The geometry of the driveway is specified to accommodate tractor-trailer traffic. For security purposes and control of access to the proposed power plant, ingress/egress is limited to one location. To provide tractor-trailer access to the entire site, a roadway of 20 feet width and a minimum radius of 30 feet will be provided around the perimeter of the power plant and Kifer Receiving Station.

Ten parking spaces have been provided for the power plant. It is anticipated that four to six parking spaces will be needed for regularly scheduled employees. Another five to six spaces will be dedicated for short-term visitors to the PPP. It is anticipated that ten parking spaces will be adequate to handle all on-site parking needs of the PPP. No on-street parking will be required for the operational phase of the PPP.

During plant operations, trucks will periodically deliver/pickup replacement parts, lubricants, liquid fuels, aqueous ammonia, sulfuric acid, trash and other consumables. On average, there will be one or fewer truck deliveries to the project site per day. Table 8.12-8 provides a summary of hazardous materials transportation frequencies.

Table 8.12-8. Truck transportation of hazardous materials and hazardous waste to and from the site.

Delivery Type	Number and Occurrence of Trucks
Aqueous Ammonia	2 per every three weeks
Sulfuric Acid	1 per month
Cleaning Chemicals	1 per month
Trash Pickup	1 per week
Sanitary Waste	1 per week during construction only

According to Section 31303 of the California State Vehicle Code, the transportation of hazardous materials shall occur on state or interstate highways offering the shortest possible overall transit time. In addition, the transporter shall avoid, whenever practicable, congested thoroughfares, places where crowds are assembled, and residential districts. According to Vehicle Code 3200.5, transporters of hazardous materials must contact the CHP and apply for a Hazardous Material Transport Permit.

All transporters of hazardous materials to the project site will be required to have a Hazardous Materials Transportation License. The licensed shipper will obtain a handbook specifying the routes approved to ship such materials. In addition, all shipments will follow the City-designated hazardous materials truck routes.

Transportation impacts associated with power plant operation will not be significant for the following reasons:

- If the 14 trips generated by the operations workforce occur during the peak commute hour periods (7 a.m. to 8 a.m. and 5 p.m. to 6 p.m.), the LOS classifications of potentially affected roadway intersections will not change. Visits by tradespeople, vendors, consultants, and other non-plant personnel will be limited in number and will occur primarily during non-peak commute periods.
- Deliveries of hazardous materials will be occur approximately once every two weeks. Delivery of these materials will occur over prearranged routes and will be in compliance with all LORS governing the safe transportation of hazardous materials.

Natural Gas Pipeline and Metering Station

The only traffic associated with the operation of the natural gas pipeline and metering station will be occasional preventative maintenance or repair vehicles in the event of damage to any of the lines. This traffic will not cause any significant change to local traffic conditions.

Waste Water Discharge Pipeline

The only traffic associated with the operation of the waste water discharge pipeline will be occasional preventative maintenance or repair vehicles in the event of damage to any of the lines. This traffic will not cause any significant change to local traffic conditions.

Construction Laydown and Worker Parking Areas

These areas will be returned to their previous uses after construction of the power plant and other facilities. There will be no traffic impacts.

8.12.3 Cumulative Impacts

There should not be any significant cumulative impacts resulting from the project in combination with any other proposed projects within the City, since impacts resulting from the power project will have a negligible affect on LOS parameters. There are no large planned developments in the general project area being considered by the City of Santa Clara. This project is an infill development within a built-out industrial area of Santa Clara. Traffic volumes generated by the PPP during the operations phase will be sufficiently low that there should be no significant environmental impact. The proposed PPP does not generate the threshold level of trips necessary to require a full traffic analysis as recommend by the Institute of Transportation Engineers (ITE) (2001). The existing roadway infrastructure is adequate to accommodate the predicted traffic movements generated by the proposed PPP. In addition, the proposed PPP will not meet the standards of significance for traffic impacts. The City of Santa Clara also adheres to the requirements of the Santa Clara Valley Transportation Authority (the local congestion management

agency), which is anticipated to further reduce any potential traffic impact as a result of this proposed rezone.

8.12.4 Proposed Mitigation Measures

This section describes the applicant's proposed mitigation measures that will be implemented to reduce or eliminate potential impacts.

8.12.4.1 Construction Phase

The construction contractor will prepare a construction traffic control plan and implementation program that addresses timing of heavy equipment and building materials deliveries, signage, lighting and traffic control device placement, and the establishment of delivery/work hours outside of peak traffic periods.

Methods for mitigating potential traffic impacts caused by construction will include stationing flag persons at the access road into the site, and advance warning flashes, flag persons, and signage along the roadways associated with the natural gas pipeline. Roadways damaged during construction of the natural gas pipeline will be resurfaced to their existing condition.

It should be noted that most trip reduction strategies are not feasible for the construction phase of the project primarily because of the differing schedules of tradespersons and the need to transport tools and materials to the job site.

8.12.4.2 Operation Phase

Truck Traffic

Mitigation of potential truck traffic impacts will be in the form of adherence to all laws, ordinances, regulations, and standards (LORS) found in Section 8.12.5 below.

Employee/Other Traffic

The total number of trips generated by employees and other personnel during peak hours will not cause a significant adverse impact. In addition, on-site parking will mitigate any potential impact to on-street parking within the surrounding industrial neighborhood

8.12.5 Laws, Ordinances, Regulations, and Standards

All applicable laws, ordinances, regulations, and standards and their conformance measures are detailed in the text below. Table 8.12-9 summarizes this information and provides agency contacts.

8.12.5.1 Federal

The Hazardous Materials Transportation Act of 1974, 49 Code of Federal Regulations (CFR) 397.9, is a federal law applicable to this project. It directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials. There are no specific conformance measures necessary for this law.

8.12.5.2 State

State laws that will apply to this project include the following:

- California Vehicle Code Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways. The project will conform to Section 35780 by requiring that shippers obtain a Single Trip Transportation Permit for oversized loads, as required by Caltrans, for each vehicle.

Table 8.12-9. Laws, ordinances, regulations, and standards.

LORS	Document and Page	Applicability	AFC Section Where Conformance is Discussed	Agency/Contact
Federal:				
Transport of Hazardous Materials	Hazardous Materials Transportation Act	Requires transporters to adhere to established regulations	8.12.5.1	**NA**
State:				
Transport oversized or excessive loads over state highways	California Vehicle Code Section 35780	Requires permit to transport oversized or excessive loads over state highways. Enforced by the California Highway Patrol.	8.12.2.3	California Department of Transportation (District 4) James McCrank (510) 541-6345
Transport hazardous materials on state or interstate highways	California Vehicle Code Section 31303(b)	Requires that the transportation of hazardous materials be on state or interstate highways that offer the shortest overall transit time possible.	8.12.2.3 8.12.2.4	California Highway Patrol Sgt. Debbie Pierce (916) 445-1865
Transport hazardous materials on state or interstate highways	California Vehicle Code Section 31303(c)	Requires that the transportation of hazardous materials avoid, whenever practicable, places where crowds are assembled, and residence districts.	8.12.2.3 8.12.2.4	California Highway Patrol Sgt. Debbie Pierce (916) 445-1865
Licensing of hazardous materials transporters	California Vehicle Code Section 32000.5	Requires that transporters of hazardous materials contact the California Highway Patrol and apply for and receive a Hazardous Material Transportation License.	8.12.2.3 8.12.2.4	California Highway Patrol Sgt. Debbie Pierce (916) 445-1865

Table 8.12-9. (continued.)

LORS	Document and Page	Applicability	AFC Section Where Conformance is Discussed	Agency/Contact
Local:				
Provide for the long-range planning and development of Santa Clara transportation system	City of Santa Clara General Plan, Transportation Element	Encourage new development to incorporate TDM measures through site design guidelines, including preferential carpool and vanpool parking, flex time, transit ticket sales, enhanced pedestrian access, bicycle storage and on-site eating and recreation facilities	Figure 8.12-2 8.12.2.3 8.12.2.4	City of Santa Clara Planning Department Kevin L. Riley, AICP (408) 615-2450
		According to the City's General Plan, the basic performance standard for intersections is LOS "D."	8.12.1.3 Table 8.12-1 Table 8.12-6 8.12.4.2	City of Santa Clara Planning Department Kevin L. Riley, AICP (408) 615-2450
Encroachment permit (natural gas pipeline)	California Streets and Highway Code, Division 2 Chapter 5.5 Sections 1460-1470	Require an encroachment permit to make an opening or excavation for any purpose in roadway.	8.12.3.2	City of Santa Clara Public Works Department, Darrell J. Mackie, P.E., Civil Engineer II (408) 985-7936

- California Vehicle Code Section 31303(b) requires that the transportation of hazardous materials occur on state or interstate highways offering the shortest overall transit time possible. The project will conform to Section 31303(b) by requiring that shippers of hazardous materials use the shortest route possible to and from the project site.
- California Vehicle Code Section 31303(c) requires that the transporters of hazardous materials avoid, whenever practicable, congested thoroughfares, places where crowds are assembled, and residential districts. The project will conform to Section 31303(c) by requiring transporters to use routes that avoid these areas, if possible.
- California Vehicle Code Section 32000.5 requires that shippers of hazardous materials must contact the California Highway Patrol and apply for and receive a Hazardous Material Transportation License. The project will conform to Section 32000.5 by requiring hazardous materials transporters to be licensed when transporting to and from the project site.
- California State Planning Law, Government Code Section 65302, requires each city and county to adopt a General Plan, consisting of seven mandatory elements, to guide its physical development. Section 65302 (b) requires that a circulation (transportation) element be one of the mandatory elements. The scope of a circulation element consists of the "general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan." Compliance with this section is described below under the local LORS.

8.12.5.3 Local

Most local governments also stipulate LORS that specifically affect the traffic/transportation conditions associated with local projects. The transportation element of the Santa Clara General Plan (City of Santa Clara 1992) sets forth goals, policies, and implementation programs related to traffic issues in the City of Santa Clara. The General Plan sets forth one goal for traffic: "Strive to provide a safe and convenient integrated transportation system which moves people and goods from place to place efficiently and in a cost effective manner."

The PPP will be consistent with the above-outlined goal due to the minimal amounts of construction and operational traffic associated with it. Furthermore, the PPP will implement appropriate mitigation measures during construction to ensure that safe, reliable transportation is maintained within the City for automobiles as well as bicycle and pedestrian traffic. In addition, the project will provide much needed electricity during the peak demand times of the California electric system, which provides the electric power that accommodates much of the public transportation system in the City of Santa Clara.

In addition to General Plan requirements, the California Streets and Highways Code, Division 2, Chapter 5.5, Sections 1460-1470, requires an encroachment permit if there is an opening or excavation for any purpose in any county highway. The project will conform to Section 1460-1470 by obtaining an encroachment permit from the Santa Clara Public Works Department and the California Department of Transportation for boring under Highway 101 prior to all pipeline construction.

8.12.6 Involved Agencies and Agency Contacts

Table 8.12-9 includes a listing of the agencies involved and their contact names and phone numbers.

8.12.7 Permits Required and Schedule

Table 8.12-10 outlines the permit schedule related to traffic/transportation issues for the project. Permits reflect preferred facility routing. Information required to obtain each permit is also included.

Table 8.12-10. Permit schedule for traffic and transportation.

Permit	Schedule
Encroachment permit for the natural gas pipeline: • Site specific plan • Pipeline routes • Road rights-of-way where pipelines will be constructed	1 to 2 weeks from submittal to approval by Santa Clara Public Works Department and Caltrans.
Encroachment permit for the water supply interconnect: • Site specific plan • Pipeline routes • Road rights-of-way where pipelines will be constructed	1 to 2 weeks from submittal to approval by Santa Clara Public Works Departments
Transport of oversized or excessive loads over state highways: • Specific route • Transport time • Load contents	Obtain when necessary from Caltrans, 2-hour processing time
County of Santa Clara Land Development Permit Application • Pipeline route within the County right-of-way • Cost estimate of the work to be done • Traffic control plans, if applicable	2 to 3 weeks from submittal to approval by County of Santa Clara Roads and Airports Department

8.12.8 References

Association of Bay Area Governments (ABAG). 2001. Regional transportation improvement plans. Internet site: www.mtc.dst.ca.us/whats happening/STIP/res-3313.xls.

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——2000. State Transportation Improvement Program (STIP).

City of Santa Clara. 1992. City of Santa Clara General Plan Transportation Element. Internet site: http://cho.ci.santa-clara.ca.us/3081.html.

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